

Roof Curb and Opening Installation JHA

Worked instructional example

Work and worksite

A coordinated roofing and framing crew creates one project-designed equipment opening in an existing low-slope roof and anchors its specified curb. The building area below is unoccupied and released; engineered support and the cutting sequence are accepted before disturbance. This fictional learning example describes planned controls; it records no actual inspection or work authorization.

- Partial curb and mechanical-roof coordination coverage: structural opening and curb only, ending before equipment setting, utility connections and permanent flashing.
- Surveyed structure, affected services, material hazards and temporary support are resolved in the project-specific opening package.
- Accepted protected access, opening protection and temporary weather measures remain available through every stage.

Questions before work

- Who accepts the existing structure, engineered support and actual opening sequence before cutting starts?
- How will the crew prevent falls and falling material while the opening changes size and shape?
- Which checks establish that the curb is supported, anchored and ready for the next roofing and equipment trades?

Task Hazard Control

1 Release the survey and opening design

Hazard: An unrecognized load path or service can fail or be struck when the roof is cut.

Control: Review the accepted survey, structural opening and support drawings, service isolation and material-hazard clearance. Mark the exact boundary and identify who authorizes each support and cutting release.

Verification: Lead records the design revision and confirms survey and isolation actions are closed before disturbance.

Reasoning: A curb submittal gives product information; it does not authorize cutting the existing structure.

2 Protect access and the area below

Hazard: Workers can fall through the changing opening or be struck by removed roof material.

Control: Close the area below and arrange accepted roof access, edge and opening protection. Plan protection transfers with the opening sequence and keep a clear material-removal route.

Verification: Responsible person checks protection and exclusion before the first layer is removed.

Reasoning: A cover that suits the finished opening may not protect each intermediate stage.

3 Install and accept the designed support

Hazard: Removing load-bearing material before support is established can cause local or wider collapse.

Control: Install the project-designed temporary and permanent supporting work in its accepted sequence. Do not infer capacity from adjacent members; inspect the required connections before releasing any structural cut.

Verification: Authorized reviewer records support acceptance and the specific next operation it permits.

Reasoning: Support release is a structural decision rather than a judgment that the roof feels firm.

Complete the work and hand over

4 Remove the released opening materials

Hazard: Hidden fixings, sharp edges and falling sections create cutting, crushing and exposure hazards.

Control: Cut only the accepted boundary and sequence using the planned tools and exposure controls. Support each section before separation, control its removal and maintain opening protection as the work progresses.

Verification: Lead verifies actual material matches the survey and checks each changed opening condition.

Reasoning: An unexpected member or substrate can invalidate the sequence even if the marked opening is correct.

5 Set and anchor the specified curb

Hazard: An unsecured curb can shift; poor bearing or attachment leaves an unaccepted equipment support.

Control: Position the identified curb through the accepted handling plan. Establish its designed bearing and complete the specified anchors without improvised roof connections; preserve access and protect sharp edges.

Verification: Responsible installer records curb identity, support, anchorage and dimensional acceptance against the project details.

Reasoning: The curb must match both the roof support and the future equipment interface.

6 Protect and hand off the unfinished interface

Hazard: An open or wrongly covered curb can admit weather, expose workers to falls or invite premature equipment loading.

Control: Install accepted opening and temporary weather protection, remove loose materials and mark the curb's release status. Hand over anchorage and support records; retain holds on equipment setting and permanent flashing until their separate acceptance.

Verification: Supervisor confirms protection condition and named responsibilities for the next trade's work.

Reasoning: Finishing the curb does not automatically authorize loading it or exposing the building to weather.

Pause and reassess

- Pause for uncharted services, different structure or materials, support movement, missing opening protection or changed weather.
- Replan if equipment loading, structural redesign, utility work or permanent flashing enters the task.

Improve the controls

Needs improvement: Work carefully and wear PPE.

More useful: Install the project-designed temporary and permanent supporting work in its accepted sequence. Do not infer capacity from adjacent members; inspect the required connections before releasing any structural cut.

Needs improvement: Check that everything is ready.

More useful: Review the accepted survey, structural opening and support drawings, service isolation and material-hazard clearance. Mark the exact boundary and identify who authorizes each support and cutting release.

Decisions that change the analysis

Does the TPO curb-flashing example cover this opening?

No. That example starts with an accepted curb and applies its roof membrane details. This task establishes the designed structural opening, support and curb anchorage before that flashing stage.

What must the crew record for actual use?

Identify the actual equipment and work boundaries, responsible people, applicable criteria, inspection findings and open actions. Resolve changes with affected crews and obtain required project authorization before work.

Training needs

- Train the coordinated crew to recognize structural release boundaries, changed survey findings and opening-protection transfers.
- Verify competence for the accepted support, cutting and curb-anchorage operations and the documented trade handoff.

Confirm applicable qualifications and actual training evidence for the people assigned. Related toolbox talks support discussion; they do not establish competence.

References and adaptation

Pate Conventional roof curb product and submittal resources
<https://www.patecurbs.com/products/conventional-roof-curbs/>

OSHA 1926.850 Demolition preparatory operations
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.850>

OSHA 1926.501 Duty to have fall protection
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.501>

OSHA 1926.300 Hand and power tools
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.300>

OSHA 1926.21 Safety training and education
<https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.21>

References reviewed October 9, 2026. Use actual equipment and product instructions, project design and site requirements. This original draft supplies no fabricated inspection, signature or approval.